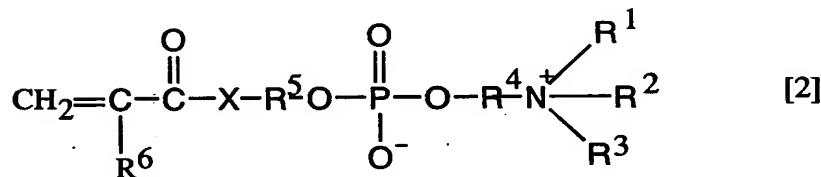


WHAT IS CLAIMED IS:

1. An immunoassay of a prostate-specific antigen comprising performing an antigen-antibody reaction in the 5 presence of a polymer having a monomer unit derived from a monomer represented by the following general formula [2]: (wherein, R¹-R³ are each independently a hydrogen atom or an alkylene group optionally having a hydroxyl group; R⁴ is an alkylene group; R⁵ is an alkylene group optionally having a substituent and optionally having an oxygen atom in the 10 chain; R⁶ is a hydrogen atom or a methyl group; and X is an oxygen atom or a -NH- group).

2. The immunoassay according to claim 1, wherein the polymer is a copolymer obtained by polymerizing:

15 the monomer represented by the following general formula [2]:



(wherein, R¹-R³ are each independently a hydrogen atom or an alkylene group optionally having a hydroxyl group; R⁴ is an alkylene group; R⁵ is an alkylene group optionally having a substituent and optionally having an oxygen atom in the chain; R⁶ is a hydrogen atom or a methyl group; and X is an oxygen atom or a -NH- group); and

25 a monomer selected from a group consisting of

acrylic acid or acrylate ester, methacrylic acid or methacrylate ester, acrylamide or N-substituted derivatives thereof, methacrylamide or N-substituted derivatives thereof, and styrene or derivatives thereof.

5 3. The immunoassay according to claim 2, wherein acrylate ester is alkyl acrylate or aralkyl acrylate.

4. The immunoassay according to claim 2, wherein methacrylate ester is alkyl methacrylate or aralkyl methacrylate.

10 5. The immunoassay according to claim 2, wherein N-substituted derivative of acrylamide is N-alkyl acrylamide or N-aralkyl acrylamide.

6. The immunoassay according to claim 2, wherein N-substituted derivative of methacrylamide is N-alkyl methacrylamide or N-aralkyl methacrylamide.

15 7. The immunoassay according to claim 2, wherein methacrylate ester is stearyl methacrylate, benzyl methacrylate, polyoxyethyl methacrylate, butyl methacrylate or N,N,N-trimethylammonium-2-hydroxypropyl methacrylate chloride.

20 8. The immunoassay according to claim 2, wherein methacrylate ester is benzyl methacrylate.

9. The immunoassay according to claim 7 or 8, wherein a ratio of the monomer unit derived from the monomer 25 represented by the general formula [2] in the copolymer is 20% or more but less than 100%.

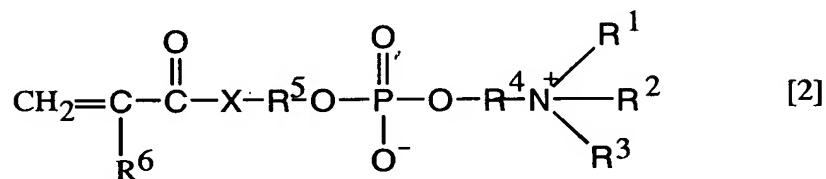
10. The immunoassay according to claim 9, wherein a molecular weight of the polymer is 10,000 to 1,000,000.

11. A kit of reagent for immunoassay of a prostate-

specific antigen comprising:

combining a reagent containing a copolymer obtained by polymerizing: a monomer represented by the following general formula [2]:

5



(wherein, R^1 - R^3 are each independently a hydrogen atom or an alkyl group optionally having a hydroxyl group; R^4 is an alkylene group; R^5 is an alkylene group optionally having a substituent and optionally having an oxygen atom in the chain; R^6 is a hydrogen atom or a methyl group; and X is an oxygen atom or a $-\text{NH}-$ group), and a monomer selected from a group consisting of acrylic acid or acrylate ester, methacrylic acid or methacrylate ester, acrylamide or 15 N-substituted derivatives thereof, methacrylamide or N-substituted derivatives thereof and styrene or derivatives thereof; and

a reagent containing an antibody to a prostate-specific antigen or a prostate-specific antigen.

20 12. The kit according to claim 11, wherein the antibody to a prostate-specific antigen or the prostate-specific antigen is supported on a carrier.

13. The kit according to claim 12, wherein the antibody to a prostate-specific antigen or the prostate-specific antigen is an antibody supported on a carrier.

14. The kit according to claim 13, wherein the carrier is latex.

15. The kit according to any of claims 11 to 13, wherein methacrylate ester is stearyl methacrylate, benzyl 5 methacrylate, polyoxyethyl methacrylate, butyl methacrylate or N,N,N-trimethylammonium-2-hydroxypropyl methacrylate chloride.

16. The kit according to any of claims 11 to 13, wherein methacrylate ester is benzyl methacrylate.